

# Power Splitter/Combiner

CSC-2-153+

2 Way-0° 50Ω 5000 to 15000 MHz



CASE STYLE: MW1663  
PRICE: Contact Sales Dept.

**+RoHS Compliant**  
The +Suffix identifies RoHS Compliance. See our web site for RoHS Compliance methodologies and qualifications

## Maximum Ratings

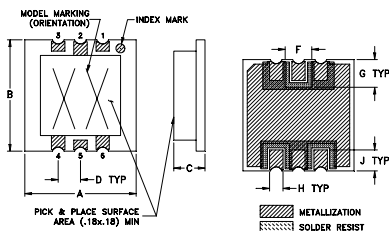
Operating Temperature	-40°C to 85°C
Storage Temperature	-55°C to 100°C
Power Input (as a splitter)	3W max.
Internal Dissipation	0.125W max.

Permanent damage may occur if any of these limits are exceeded.

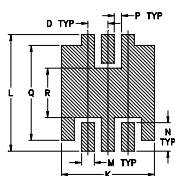
## Pad Connections

SUM PORT	2
PORT 1	4
PORT 2	6
GROUND	1,3,5

## Outline Drawing



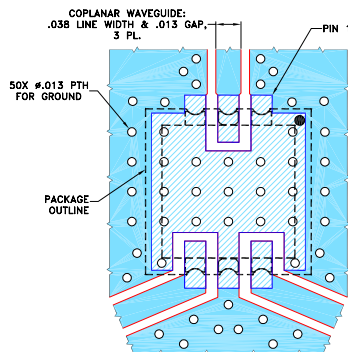
### PCB Land Pattern



## Outline Dimensions (inch/mm)

A	B	C	D	E	F	G	H	J
.250	.250	.07	.05	.060	0.062	0.03	0.047	
6.35	6.35	1.78	1.27	1.52	1.57	0.76	1.19	
K	L	M	N	P	Q	R	wt	
0.232	.291	.032	.071	.018	.237	.123	grams	
5.89	7.39	0.81	1.80	0.46	6.02	3.12	grams	0.06

## Demo Board MCL P/N: TB-707+ Suggested PCB Layout (PL-399)



### NOTES:

- TRACE WIDTH PARAMETERS ARE SHOWN FOR ROGERS RO4350B WITH DIELECTRIC THICKNESS .020"±.0015". COPPER: 1/2 OZ. EACH SIDE. FOR OTHER MATERIALS TRACE WIDTH MAY NEED TO BE MODIFIED.
  - BOTTOM SIDE OF THE PCB IS CONTINUOUS GROUND PLANE.
- DENOTES PCB COPPER LAYOUT WITH SMOBC (SOLDER MASK OVER BARE COPPER).  
 DENOTES COPPER LAND PATTERN FREE OF SOLDER MASK.

### Notes

- Performance and quality attributes and conditions not expressly stated in this specification document are intended to be excluded and do not form a part of this specification document.
- Electrical specifications and performance data contained in this specification document are based on Mini-Circuit's applicable established test performance criteria and measurement instructions.
- The parts covered by this specification document are subject to Mini-Circuits standard limited warranty and terms and conditions (collectively, "Standard Terms"); Purchasers of this part are entitled to the rights and benefits contained therein. For a full statement of the Standard Terms and the exclusive rights and remedies thereunder, please visit Mini-Circuits' website at [www.minicircuits.com/MCLStore/terms.jsp](http://www.minicircuits.com/MCLStore/terms.jsp)

## Features

- wideband, 5000 to 15000 MHz
- low insertion loss, 0.6 dB typ.
- excellent isolation, 20 dB typ.
- good amplitude unbalance, 0.2dB typ.
- aqueous washable

## Applications

- cellular
- SHF
- communication systems
- CATV
- defense

## Electrical Specifications at 25°C

Parameter	Frequency (MHz)	Min.	Typ.	Max.	Unit
Frequency Range		5000		15000	MHz
Insertion Loss Above 3.0 dB	5000-15000	—	0.6	1.5	dB
Isolation	5000-15000	14	20	—	dB
Phase Unbalance	5000-15000	—	3.0	9.0	Degree
Amplitude Unbalance	5000-15000	—	0.2	0.9	dB
VSWR (Port S)	5000-15000	—	1.5	2.3	:1
VSWR (Port 1-2)	5000-15000	—	1.6	2.2	:1

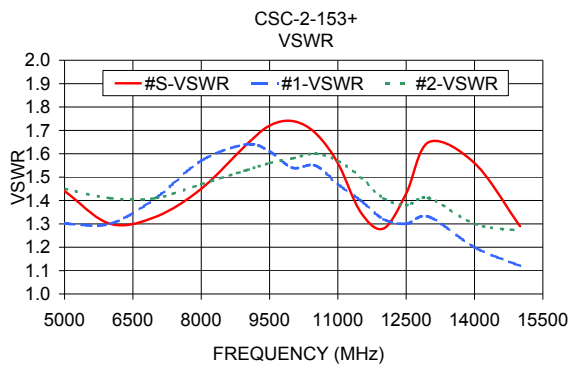
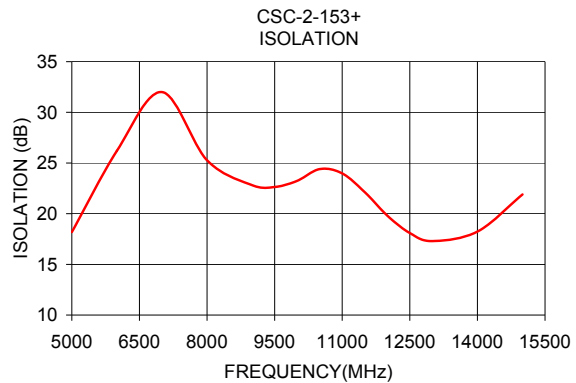
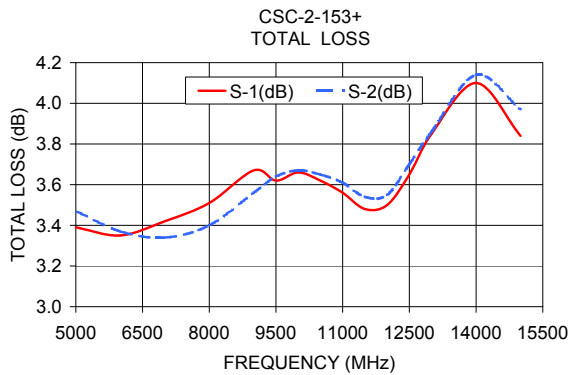
## Electrical Schematic



## Typical Performance Data

Frequency (MHz)	Total Loss <sup>1</sup> (dB)		Amplitude Unbalance (dB)	Isolation (dB)	Phase Unbalance (deg.)	VSWR S	VSWR 1	VSWR 2
	S-1	S-2						
5000.00	3.39	3.47	0.07	18.19	0.59	1.44	1.30	1.45
6000.00	3.35	3.37	0.01	26.21	0.11	1.30	1.30	1.41
7000.00	3.42	3.34	0.08	32.00	0.01	1.33	1.41	1.41
8000.00	3.51	3.40	0.11	25.27	0.45	1.45	1.57	1.47
9000.00	3.67	3.56	0.11	22.82	0.84	1.64	1.64	1.53
9500.00	3.62	3.64	0.02	22.64	1.14	1.72	1.61	1.56
10000.00	3.66	3.67	0.01	23.24	0.81	1.74	1.54	1.58
10500.00	3.62	3.65	0.04	24.40	0.88	1.69	1.55	1.60
11000.00	3.56	3.61	0.05	23.98	1.06	1.56	1.47	1.57
11500.00	3.48	3.54	0.06	22.12	0.76	1.35	1.40	1.50
12000.00	3.50	3.55	0.06	19.81	0.64	1.28	1.32	1.41
12500.00	3.65	3.70	0.05	18.09	0.66	1.43	1.30	1.38
13000.00	3.85	3.86	0.01	17.30	0.79	1.65	1.33	1.41
14000.00	4.10	4.14	0.04	18.24	1.35	1.56	1.20	1.30
15000.00	3.84	3.97	0.13	21.90	2.10	1.29	1.12	1.27

1. Total Loss = Insertion Loss + 3dB splitter loss.



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